**In the Claims:**

The current status of all claims is listed below and supersedes all previous lists of claims.

Please amend claims 1 and 14 as follows:

1.   (currently amended) A method of causing autolysis of a population of gram-negative bacteria <u>in need of inducing a collapse in bacterial cell numbers</u>, said method comprising administration to the population of an antibody to a lactone or lactone-derived signal molecule secreted by gram-negative bacteria so as to cause an imbalance in the ratio of homoserine lactone (HL) signal molecule to quinolone signal (QS) signal molecule in the environment of the population of the gram-negative bacteria.

2.   (previously presented) A method as claimed in claim 1, in which the homoserine lactone (HL) signal molecule is a homoserine lactone molecule with a formula selected from the group consisting of:
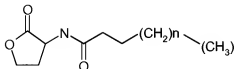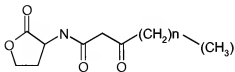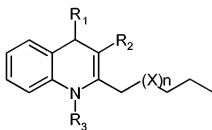

Formula (I),
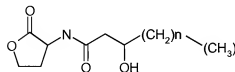
Formula (II), and

Formula (III)

where n = 0 to 12.

3.   (original) A method as claimed in claim 2, in which the homoserine lactone molecule of general formula (I) is *N*-butanoyl-L-homoserine lactone (BHL) where n = 0, *N*-dodecanoyl-L-homoserine lactone (dDHL) where n = 8 and *n*-tetradecanoyl-L-homoserine lactone (tDHL) where n = 10.

4.   (withdrawn) A method as claimed in claim 2, in which the homoserine lactone molecule of general formula (II) is *N*-(-3-oxododecanoyl)-L-homoserine lactone (OdDHL) where n = 8 or *N*-(-3-oxohexanoyl)-L-homoserine lactone (OHHL) where n = 2.

5.   (withdrawn) A method as claimed in claim 2, in which the homoserine lactone molecule of general formula (III) is *N*-(-3-hydroxybutanoyl)-L-homoserine lactone (HBHL) where n = 0.

6.   (original) A method as claimed in claim 2, in which the lactone signal molecule is OdDHL and/or BHL.

7.   (withdrawn) A method as claimed in claim 1, in which the quinolone signal (QS) signal molecule is a molecule of general formula (IV):
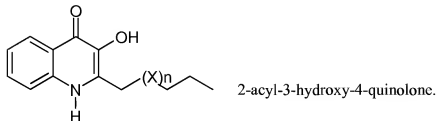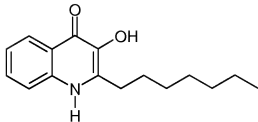

where n is 1 to 7,

R_1 is =O, or -H,

R_2 is -OH, or -H, and

R_3 is -H, or alternatively, the nitrogen atom (N) is unsubsituted.

8.   (withdrawn) A method as claimed in claim 7, in which the quinolone signal molecule of general formula (IV) is

2-acyl-3-hydroxy-4-quinolone.

9.   (withdrawn) A method as claimed in claim 8, in which the 2-acyl-3-hydroxy-4-quinolone is 2-heptyl-3-hydroxy-4-quinolone

10.   (previously presented) A method as claimed in claim 1, in which the gram negative bacteria is *Pseudomonas aeruginosa* and the ratio of bacterial signal molecules is acyl-homoserine lactone (AHL) signal molecule of formula (I) to *Pseudomonas* quinolone signal (PQS) signal molecule.

11.   (previously presented) A method as claimed in claim 1, in which the antibodies are monoclonal or polyclonal antibodies, or fragments thereof.

12.   (original) A method as claimed in claim 11 in which the antibody fragments are single chain antibody fragments (scAbs).
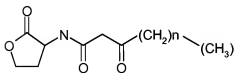
13.   (original) A method as claimed in claim 12, in which the single-chain antibodies (scAbs) are G3H5, G3B12, G3G2 and/or G3H3 deposited as NCIMB-41167, NCIMB-41168, NCIMB-41169, NCIMB-41170, respectively.

14.   (currently amended) A method for the treatment of an infection of gram-negative bacteria in a subject in need of inducing a collapse in bacterial cell numbers, said method comprising administration to the subject of an antibody to a lactone or lactone-derived signal molecule secreted by gram-negative bacteria so as to cause an imbalance in the ratio of homoserine lactone (HL) signal molecule to quinolone signal (QS) signal molecule in the environment of the gram-negative bacteria.
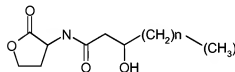
15.   (previously presented) A method as claimed in claim 14, in which the homoserine lactone (HL) signal molecule is a homoserine lactone molecule with a formula selected from the group consisting of:
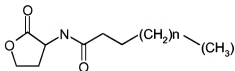
    Formula (I),

   Formula (II), and

    Formula (III)

where n = 0 to 12.

16.   (original) A method as claimed in claim 15, in which the homoserine lactone molecule of general formula (I) is N-butanoyl-L-homoserine lactone (BHL) where n = 0, N-dodecanoyl-L-homoserine lactone (dDHL) where n = 8 and n-tetradecanoyl-L-homoserine lactone (tDHL) where n = 10.

17.   (withdrawn) A method as claimed in claim 15, in which the homoserine lactone molecule of general formula (II) is N-(-3-oxododecanoyl)-L-homoserine lactone (OdDHL) where n = 8 or N-(-3-oxohexanoyl)-L-homoserine lactone (OHHL) where n = 2.

18.   (withdrawn) A method as claimed in claim 15, in which the homoserine lactone molecule of general formula (III) is N-(-3-hydroxybutanoyl)-L-homoserine lactone (HBHL) where n = 0.

19.   (original) A method as claimed in claim 15, in which the lactone signal molecule is OdDHL and/or BHL.

20.   (withdrawn) A method as claimed in claim 14, in which the quinolone signal (QS) signal molecule is a molecule of general formula (IV):
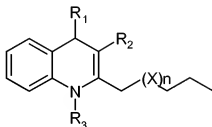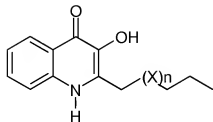

where n is 1 to 7,

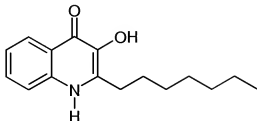R_1 is =O, or -H,

R_2 is -OH, or -H, and

R_3 is -H, or alternatively, the nitrogen atom (N) is unsubsituted.

21.   (withdrawn) A method as claimed in claim 20, in which the quinolone signal molecule of general formula (IV) is

2-acyl-3-hydroxy-4-quinolone.

22.   (withdrawn) A method as claimed in claim 21, in which the 2-acyl-3-hydroxy-4-quinolone is 2-heptyl-3-hydroxy-4-quinolone

23.   (previously presented) A method as claimed in claim 14, in which the gram negative bacteria is *Pseudomonas aeruginosa* and the ratio of bacterial signal molecules is acyl-homoserine lactone (AHL) signal molecule of formula (I) to *Pseudomonas* quinolone signal (PQS) signal molecule.

24.   (previously presented) A method as claimed in claim 14, in which the antibodies are monoclonal or polyclonal antibodies, or fragments thereof.

25.   (original) A method as claimed in claim 24 in which the antibody fragments are single chain antibody fragments (scAbs).

26.   (original) A method as claimed in claim 25, in which the single-chain antibodies (scAbs) are G3H5, G3B12, G3G2 and/or G3H3 deposited as NCIMB-41167, NCIMB-41168, NCIMB-41169, NCIMB-41170, respectively.

27-40.   (canceled).